MDR-IF4000

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model

Ver. 1.1 2005. 02



• The MDR-IF4000 is the cordless stereo headphones that comprises the MDR-DS4000.

• MDR-DS4000 consists of the following models respectively.

Cordless stereo headphone	MDR-IF4000
Digital surround processor	DP-IF4000

SPECIFICATIONS

General

Modulation System
DQPSK-IM
Secondary carrier wave frequency
3.75 MHz
Playback frequency range
10 – 22,000 Hz
Power requirements
Rechargeable nickel-metal hydride batteries (supplied) or commercially available (size AAA) alkaline batteries
Mass Approx. 300 g (11 oz) (including the supplied rechargeable nickel-metal hydride batteries)
Supplied accessories
Rechargeable nickel-metal hydride batteries
BP-HP550 (550 mAh min.) (2)
Operating Instructions (1)

Design and specifications are subject to change without notice.

CORDLESS STEREO HEADPHONE

9-879-301-02
2005B02-1
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Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Unleaded solder

Boards requiring use of unleaded solder are printed with the lead free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

 **: LEAD FREE MARK**

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
 Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
 Soldering irons using a temperature regulator should be set to about 350°C.
 Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
 Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
 It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

- Repaier DP-IF4000 with MDR-IF4000.

TABLE OF CONTENTS

Specifications 1

1. GENERAL 3

2. DISASSEMBLY
2-1. Disassembly Flow 4
2-2. Front Plate (R) Assy 4
2-3. RX Board 5
2-4. Hunger (R) 5
2-5. Wiring On The Right Side 6
2-6. Front Plate (L) Assy 6
2-7. Batt Board 7
2-8. Hanger (L) 7
2-9. Wiring On The Left Side 8
2-10. Hunger Lid (L) 8
2-11. Wiring On The SW Board 9
2-12. How To Hang The Tension Spring 9

3. DIAGRAMS
3-1. Circuit Boards Location 10
3-2. Block Diagrams 11
3-3. Printed Wiring Board – Receiver Section – 12
3-4. Printed Wiring Board – Power Section – 13
3-5. Schematic Diagram – Receiver Section – 14

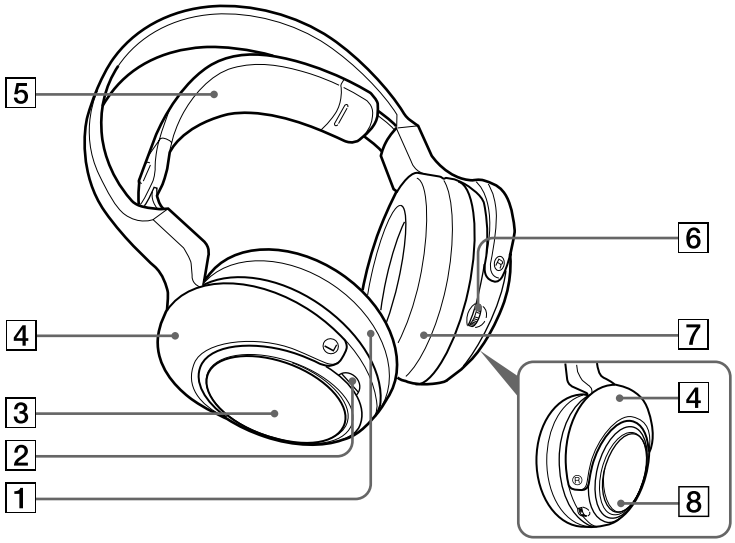
4. EXPLODED VIEWS
4-1. Housing (L) Assy Section 17
4-2. Housing (R) Assy Section 18

5. ELECTRICAL PARTS LIST 19

SECTION 1
GENERAL

This section is extracted from instruction manual.

LOCATING THE CONTROLS



1 **Ear pad (left)**

2 **Battery case button**

3 **Battery case**
Press the button of the left housing to open the battery compartment lid.
This battery case is for the rechargeable nickel-metal hydride batteries (supplied) or commercially available (size AAA) alkaline batteries only.

4 **Infrared sensor**
There are infrared sensors in two locations on both sides.

5 **Self-adjusting band**
The headphones automatically turn on when you put them on.

6 **VOL (Volume) control**
Use to adjust the volume.

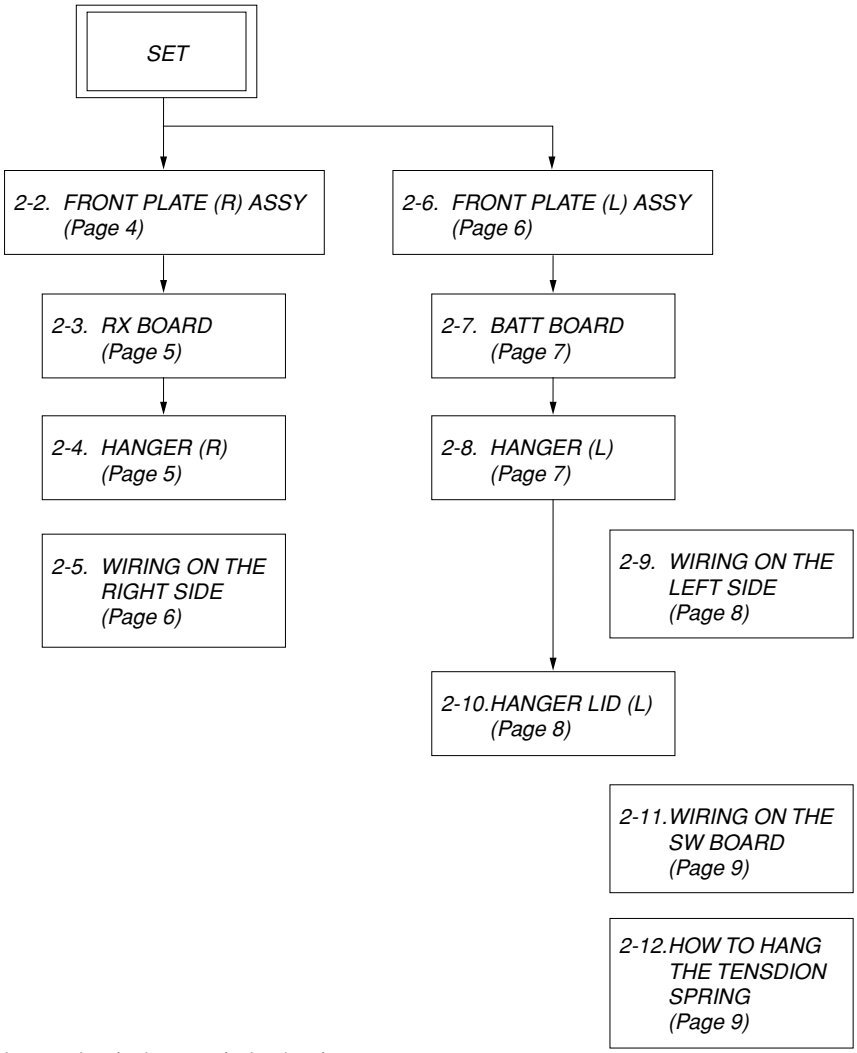
7 **Ear pad (right)**

8 **POWER indicator**
By pulling up the self-adjusting band, the indicator lights red when battery power is sufficient.

SECTION 2
DISASSEMBLY

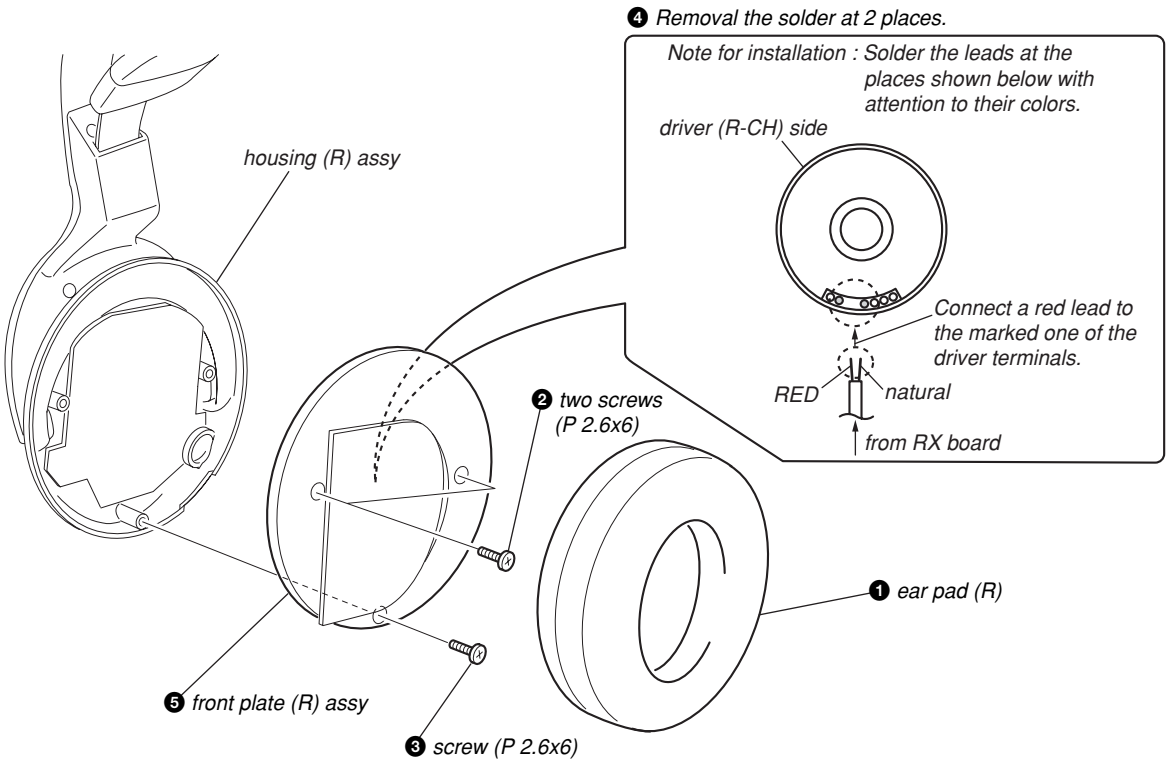
• This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

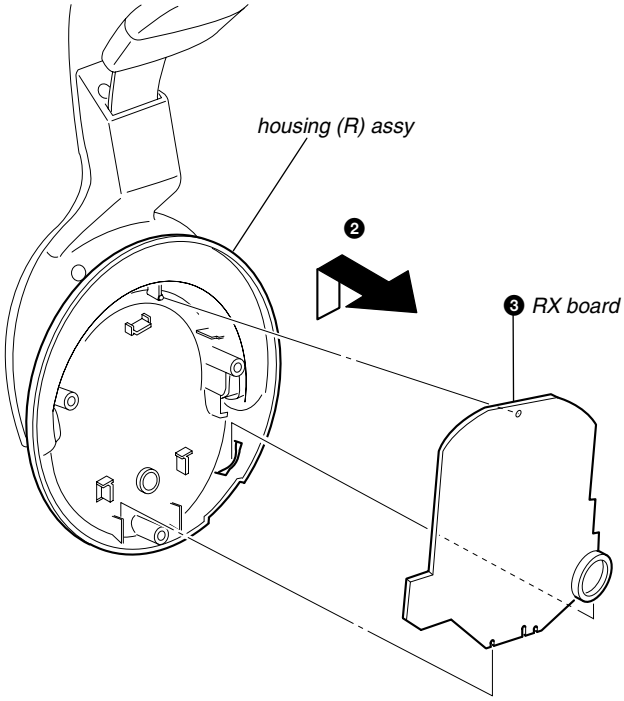


Note: Follow the disassembly procedure in the numerical order given.

2-2. FRONT PLATE (R) ASSY

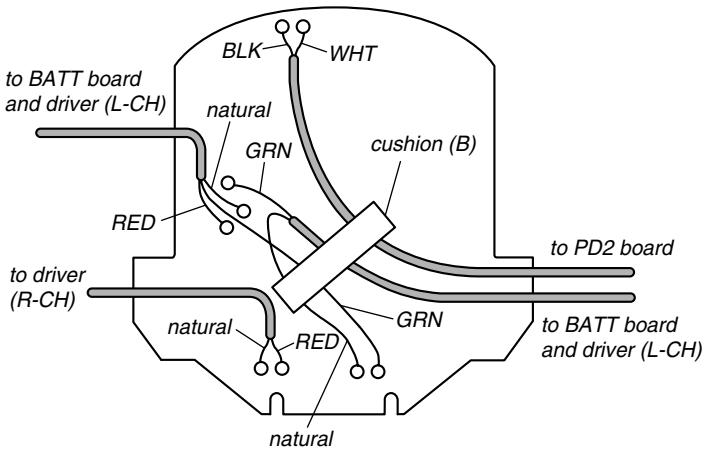


2-3. RX BAORD

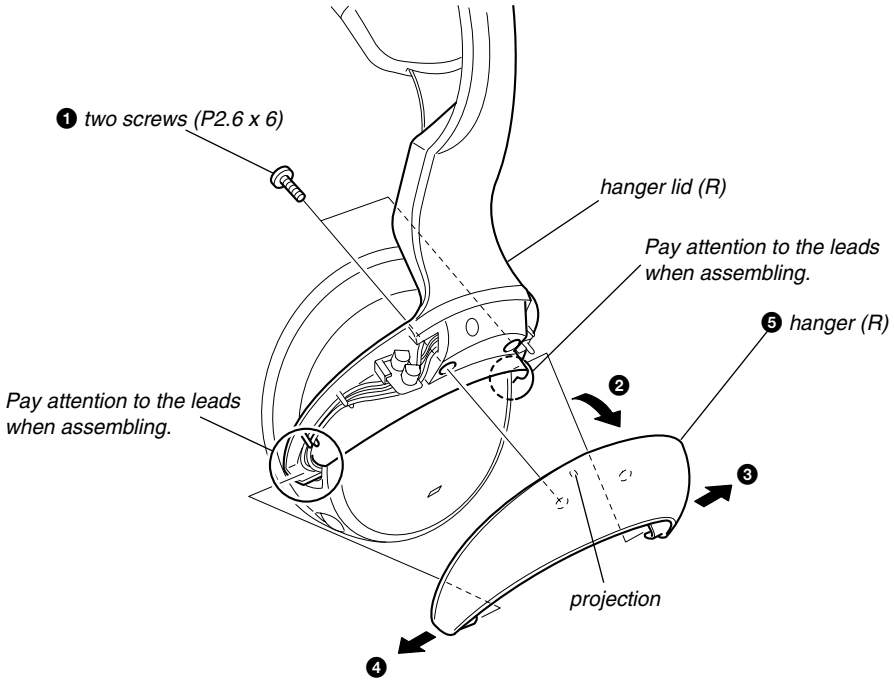


❶ Removal the solder at 9 places.

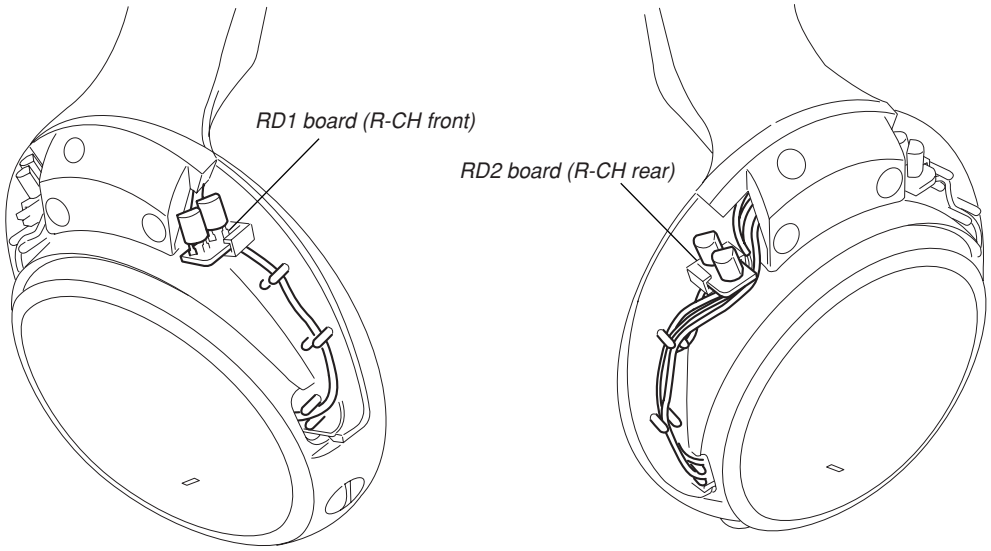
Note for installation : Solder the leads at the places shown below with attention to their colors.



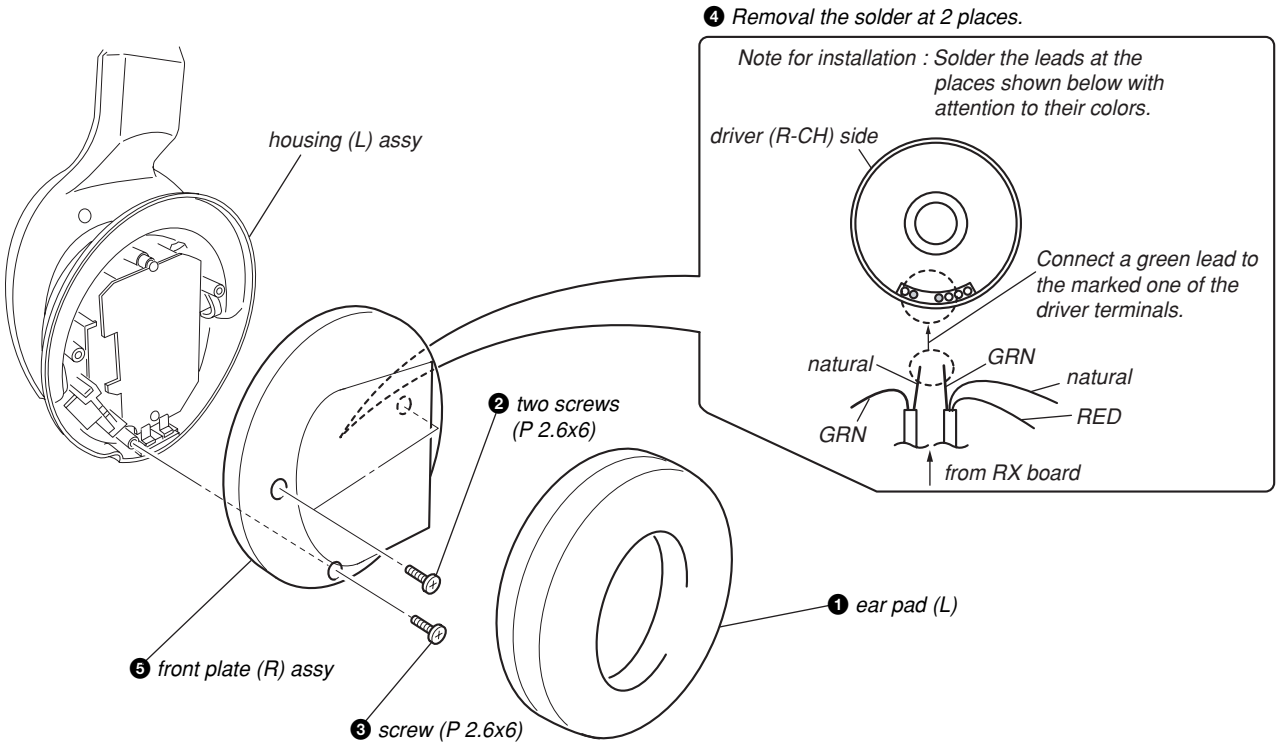
2-4. HANGER (R)



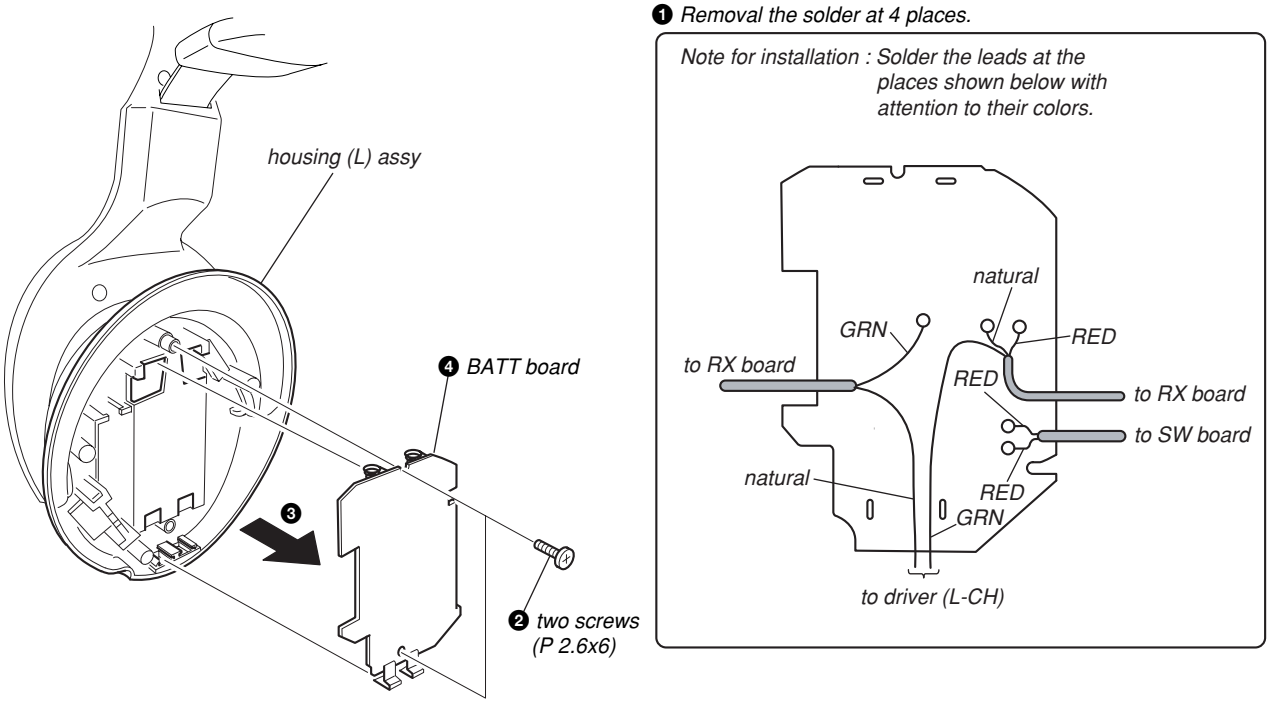
2-5. WIRING ON THE RIGHT SIDE



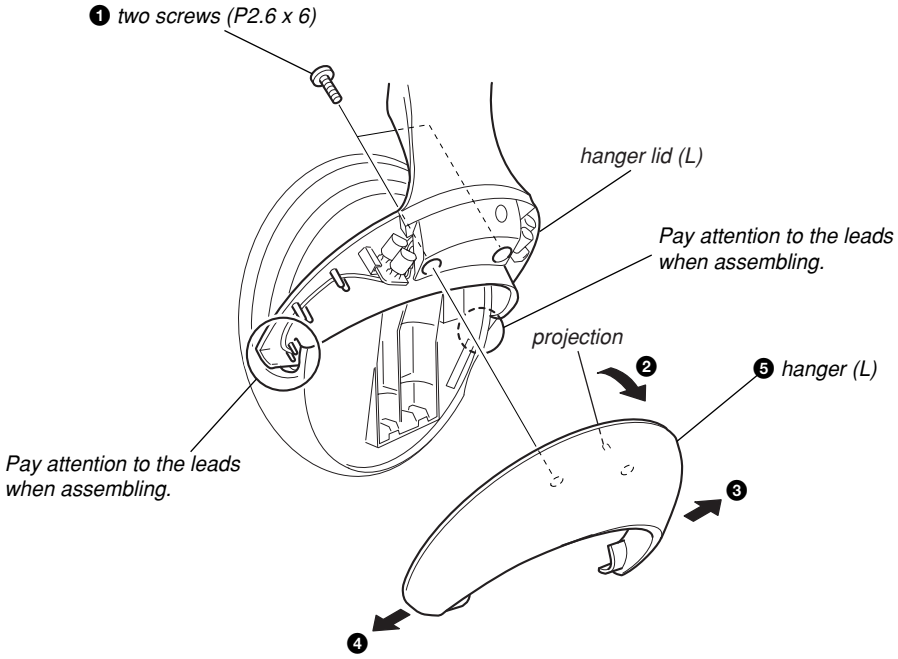
2-6. FRONT PLATE (L) ASSY



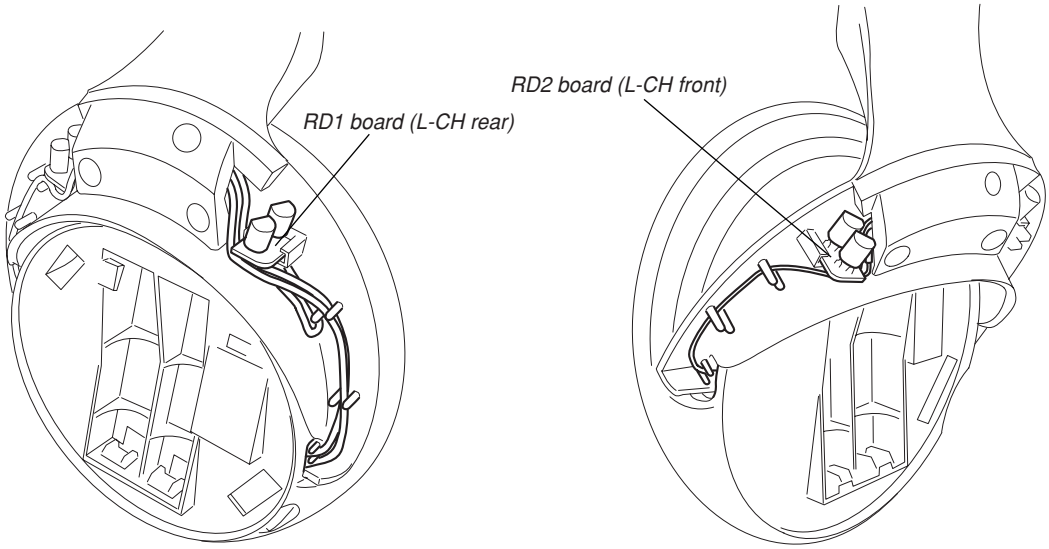
2-7. BATT BOARD



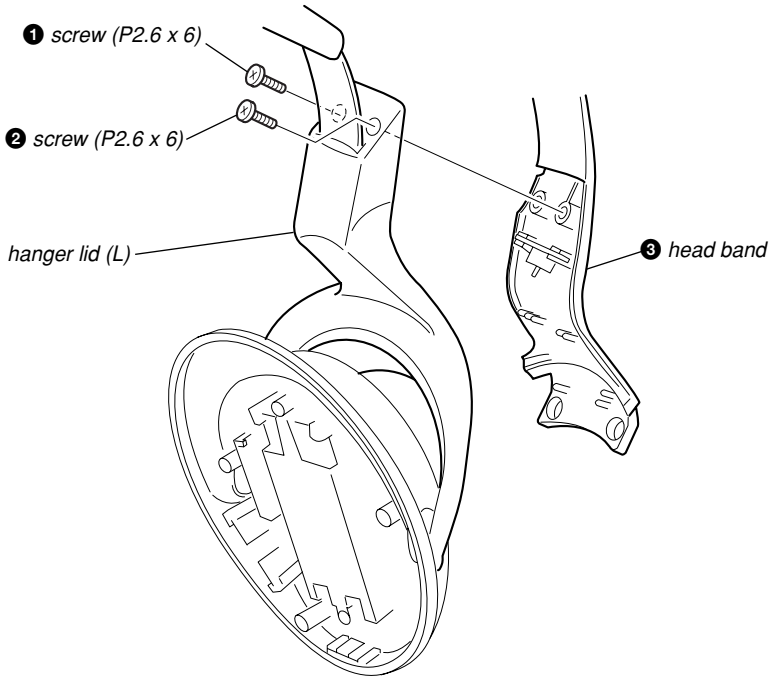
2-8. HANGER (L)



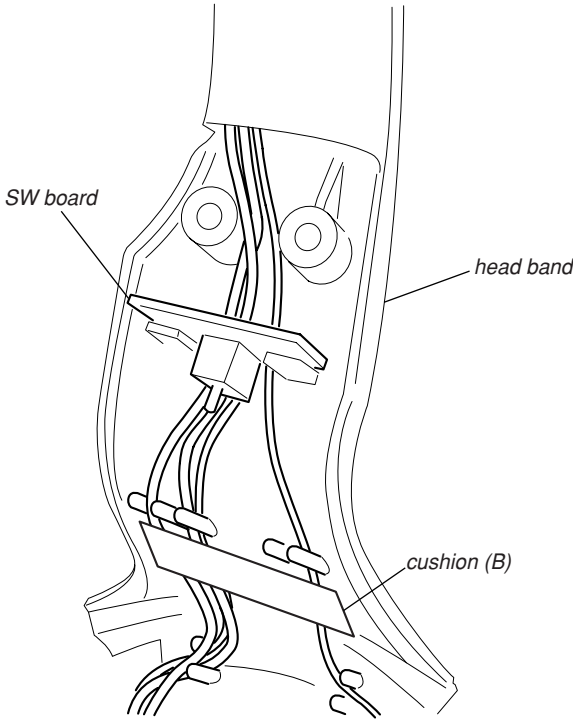
2-9. WIRING ON THE LEFT SIDE



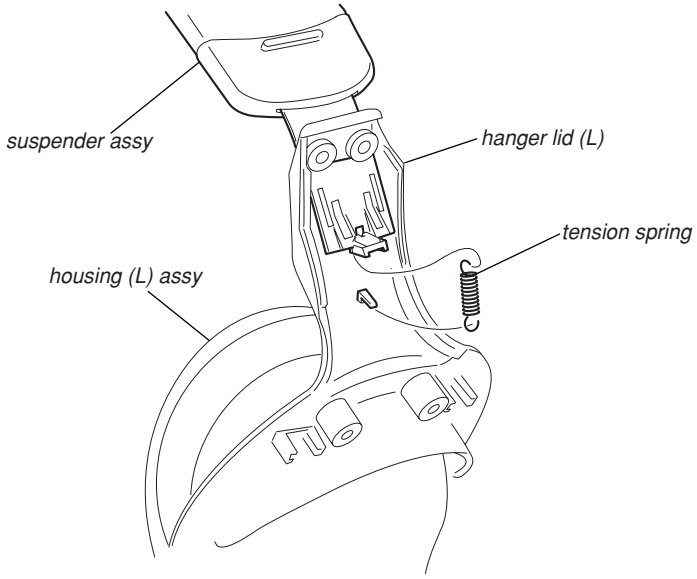
2-10. HANGER LID (L)

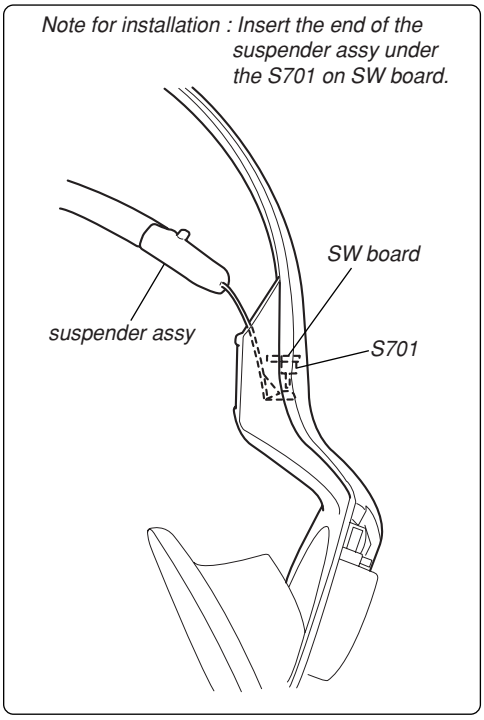


2-11. WIRING ON THE SW BOARD



2-12. HOW TO HANG THE TENSION SPRING





SECTION 3
DIAGRAMS

NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.

For schematic diagrams.
Note:

- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$ W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- ▬ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 2.4 V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 ⇨ : ANALOG
 ⇨ : RF

For printed wiring boards.
Note:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

• Waveforms

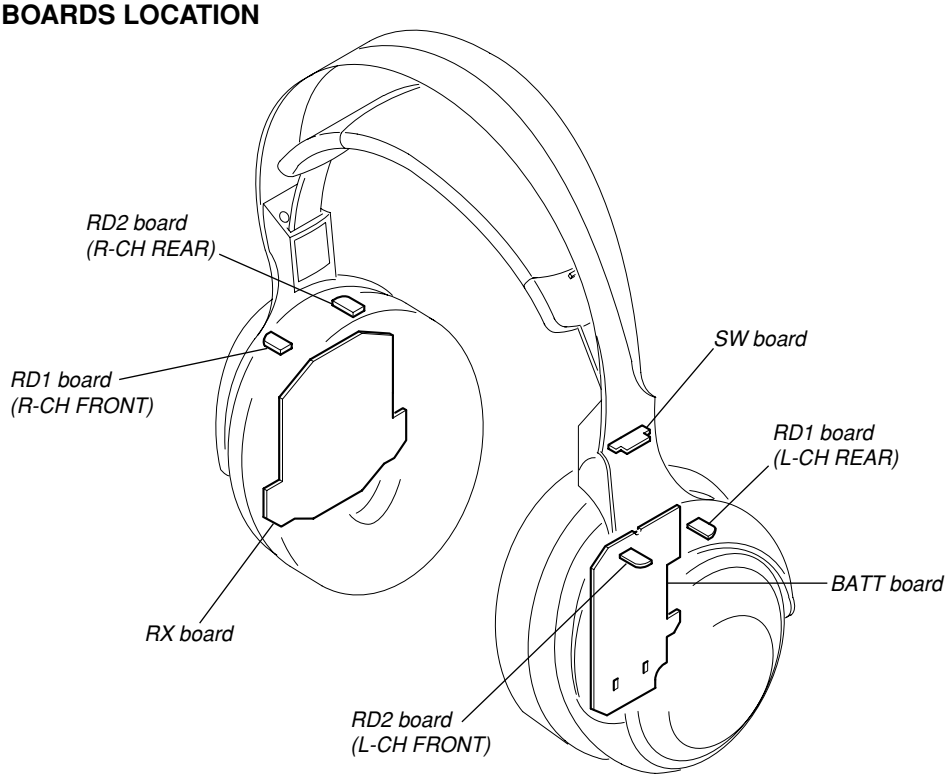
① **IC101 ㊸ OSCO**



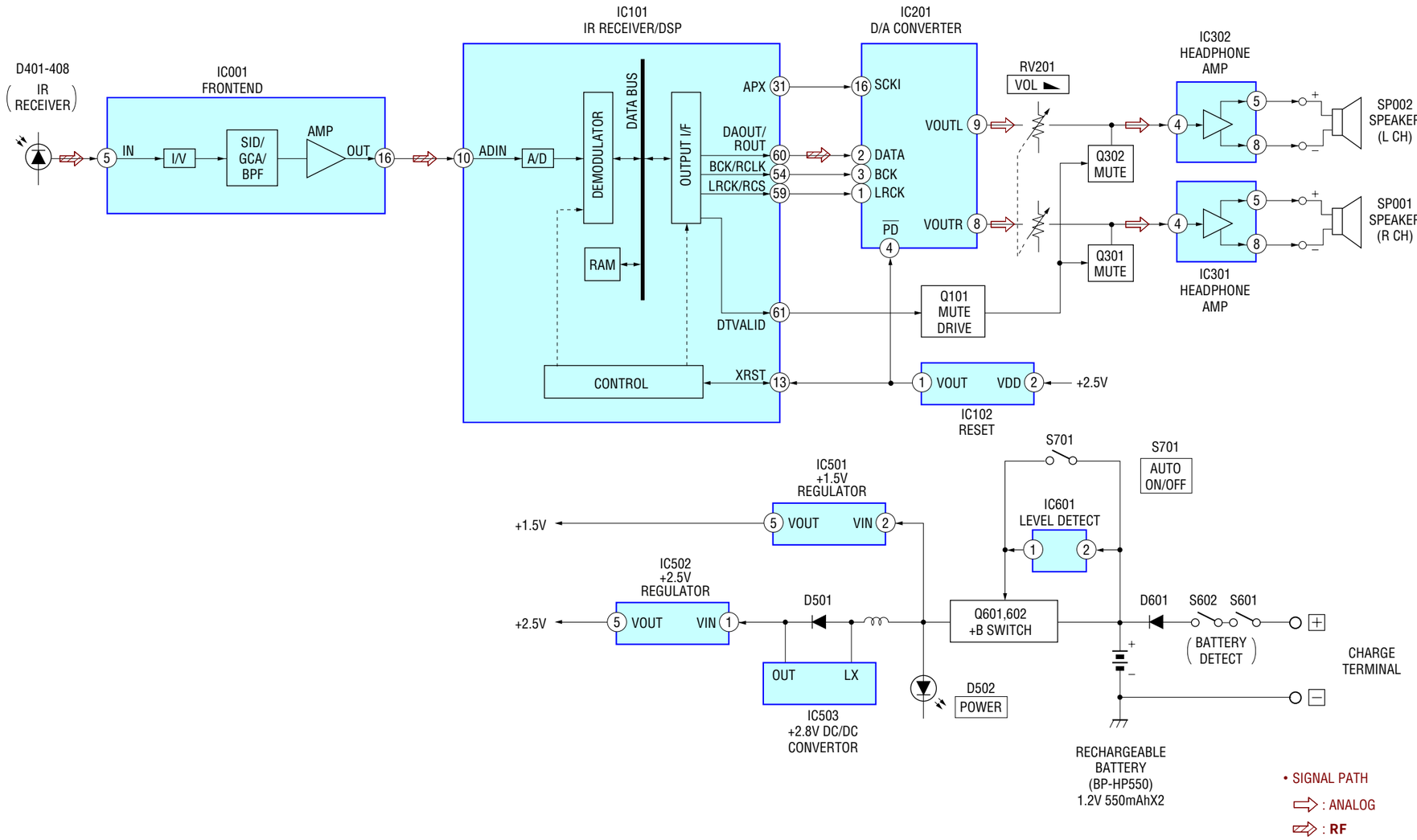
12.288 MHz *3.5Vp-p*

1V/DIV, 50 ns/DIV

3-1. CIRCUIT BOARDS LOCATION

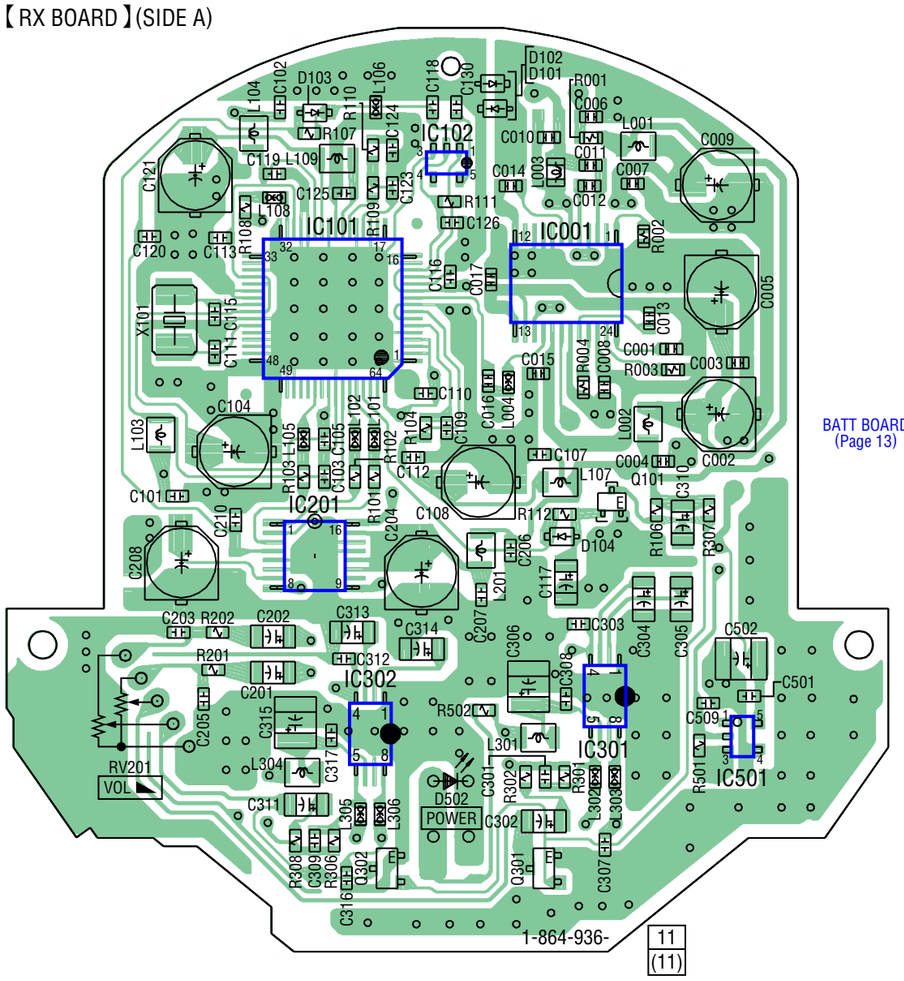


3-2. BLOCK DIAGRAM

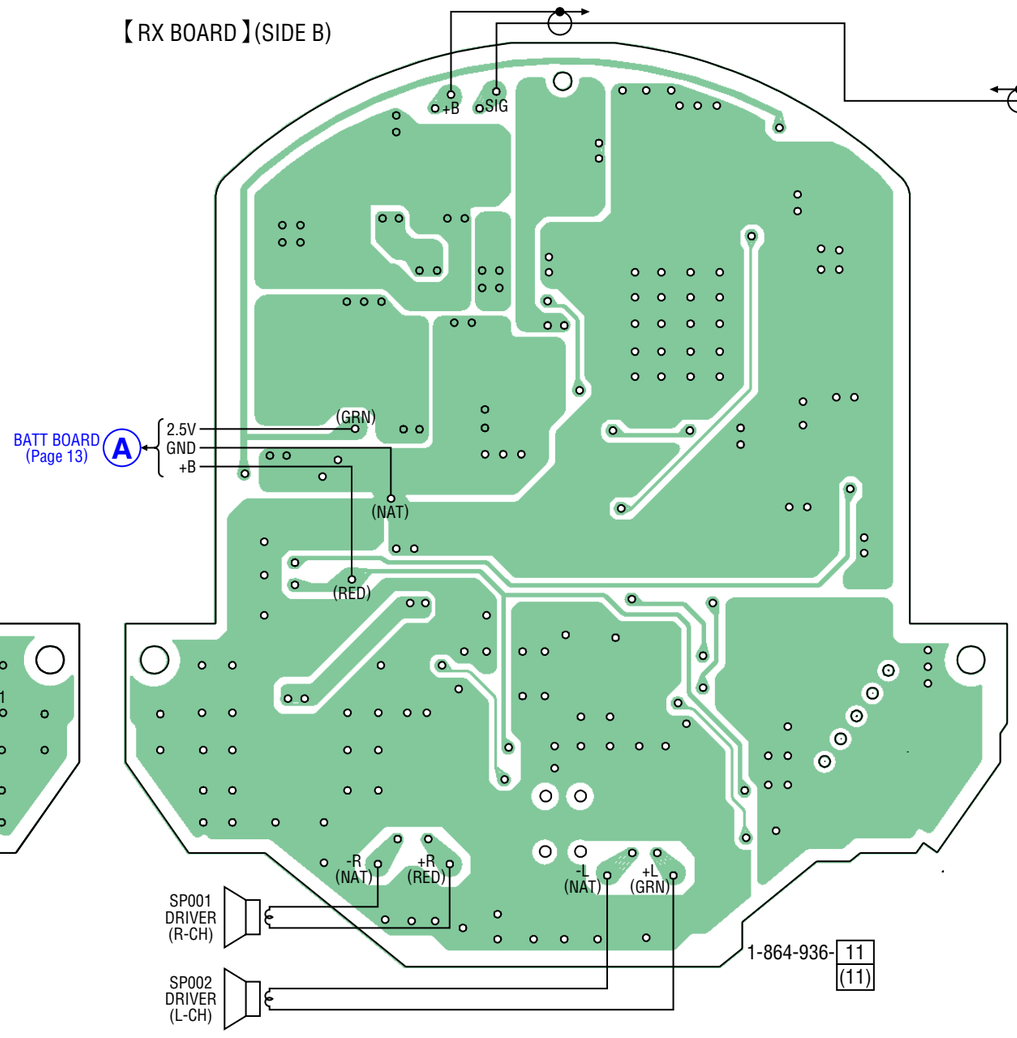


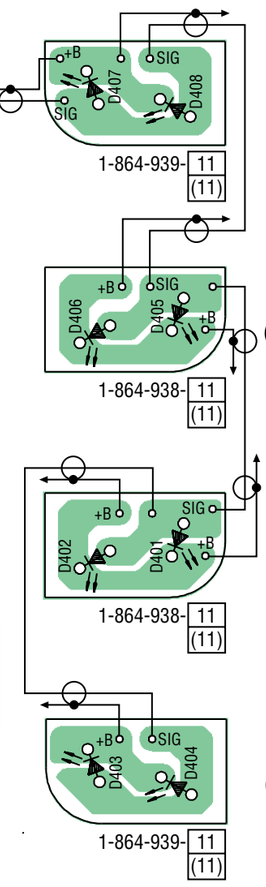
3-3. PRINTED WIRING BOARD – RECEIVER SECTION – : Uses unleaded solder.

【RX BOARD】(SIDE A)



【RX BOARD】(SIDE B)

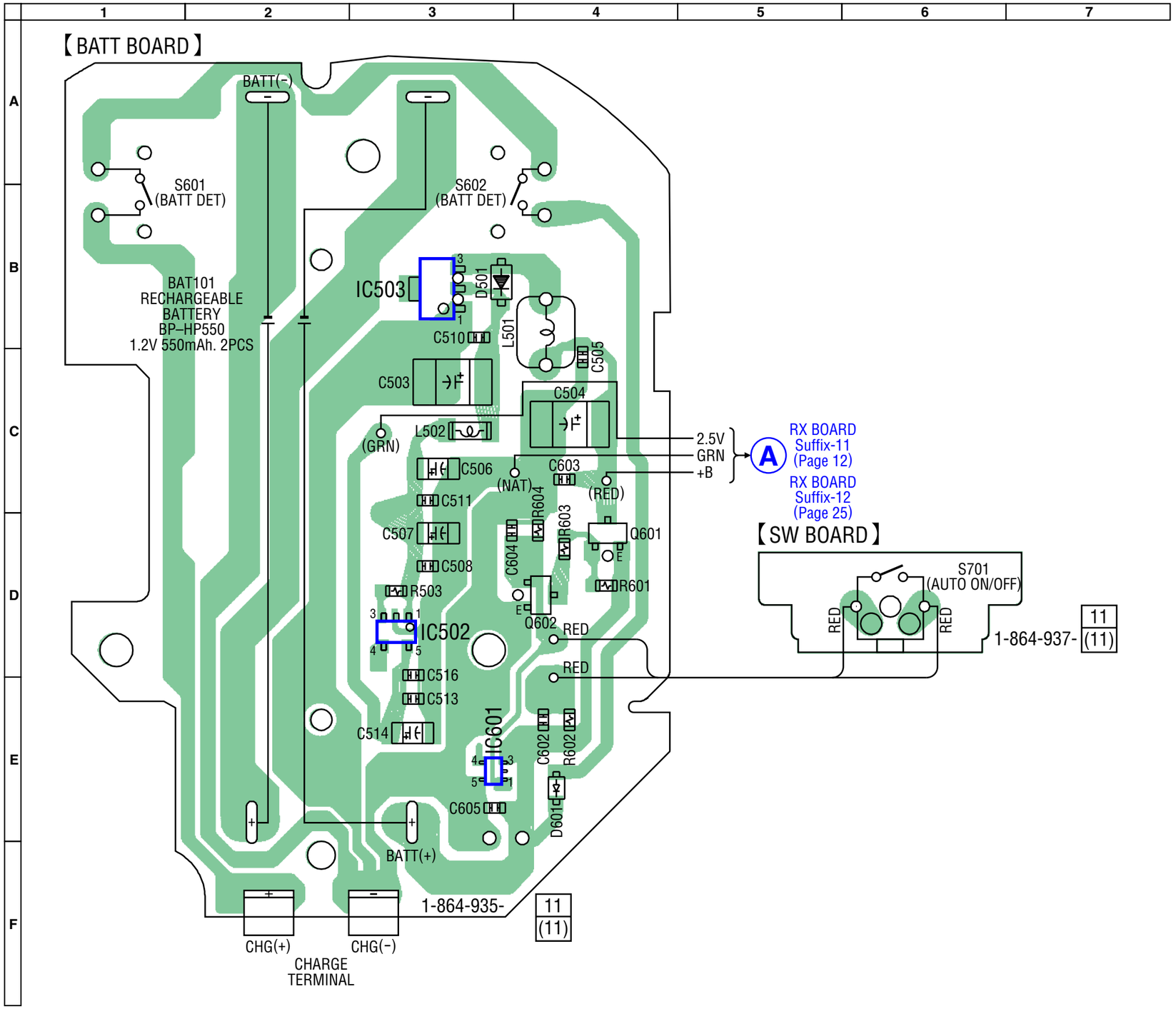




- **Semiconductor Location**

Ref. No.	Location
D101	A-3
D102	A-3
D103	A-2
D104	C-3
D401	C-9
D402	C-9
D403	D-9
D404	D-9
D405	B-9
D406	B-9
D407	A-9
D408	A-9
D502	D-3
IC001	B-3
IC101	B-2
IC102	A-3
IC201	C-2
IC301	D-3
IC302	D-2
IC501	D-4
Q101	C-3
Q301	D-3
Q302	D-2

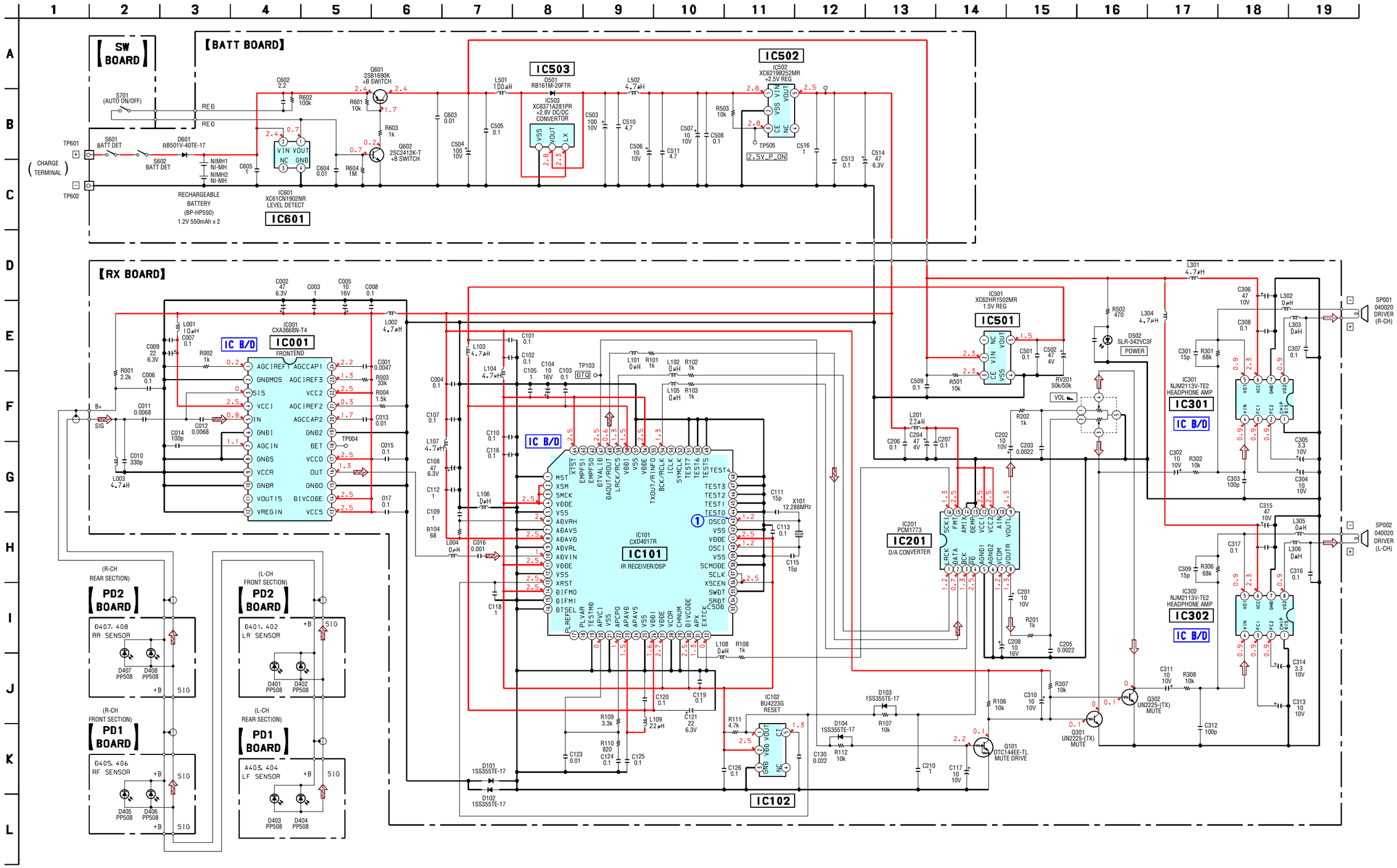
3-4. PRINTED WIRING BOARD – POWER SECTION – : Uses unleaded solder.



- **Semiconductor Location**

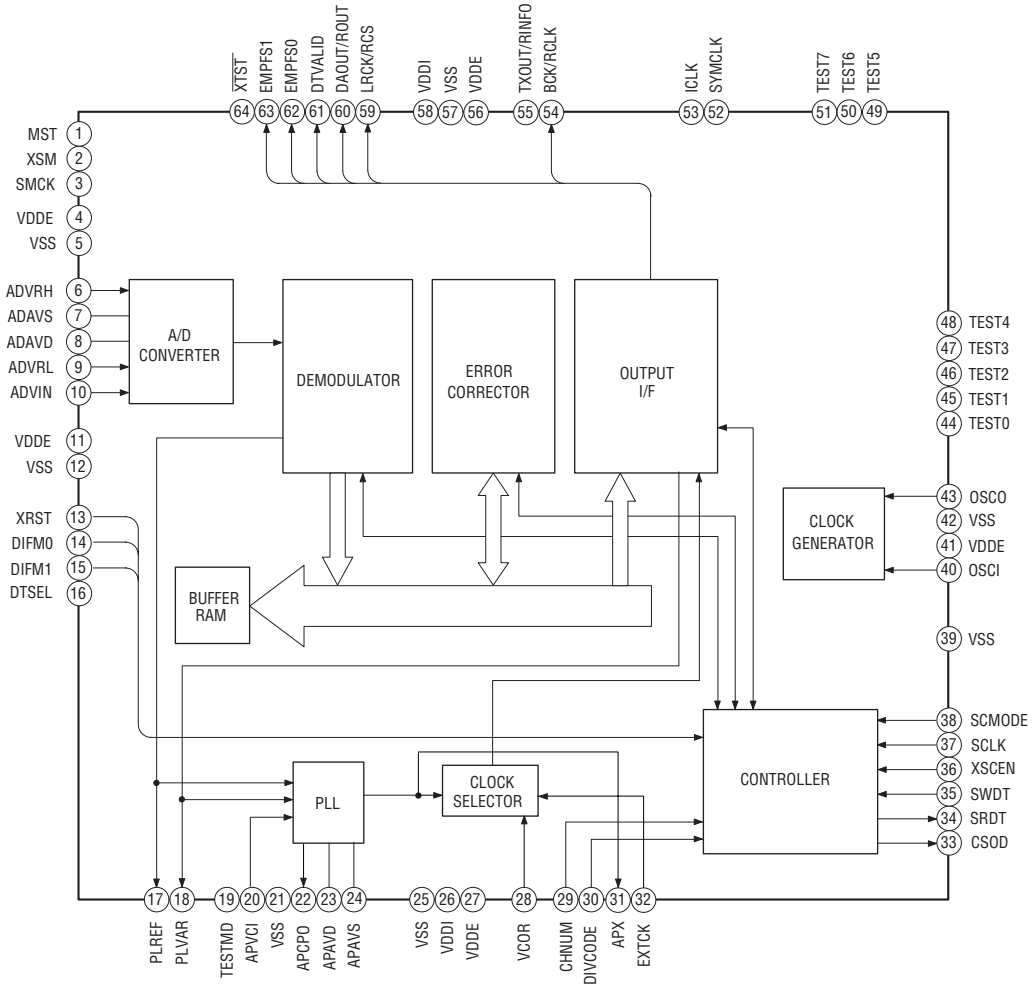
Ref. No.	Location
D501	B-3
D601	E-4
IC502	D-3
IC503	B-3
IC601	E-3
Q601	D-4
Q602	D-4

3-5. SCHEMATIC DIAGRAM – RECEIVER SECTION –

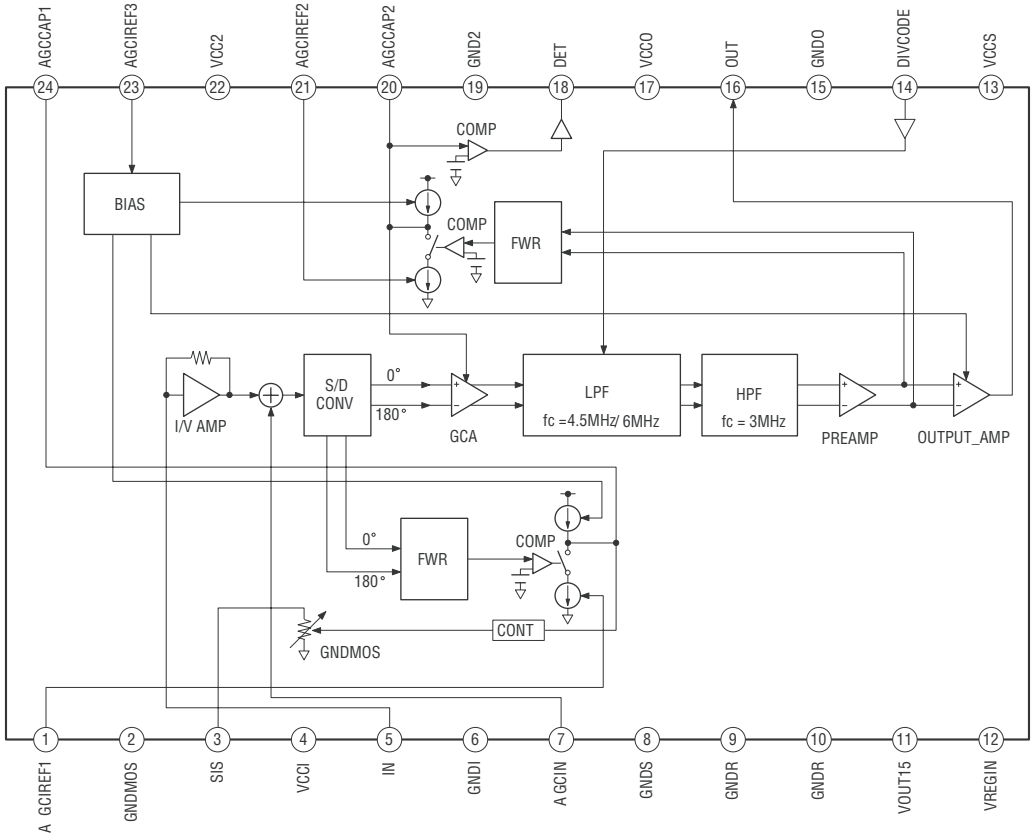


• IC BLOCK DIAGRAMS

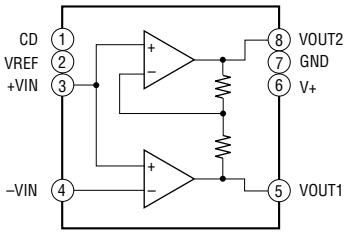
IC101 CXD4017R



IC001 CXA3668N-T4



IC301, 302 NJM2113V-TE2

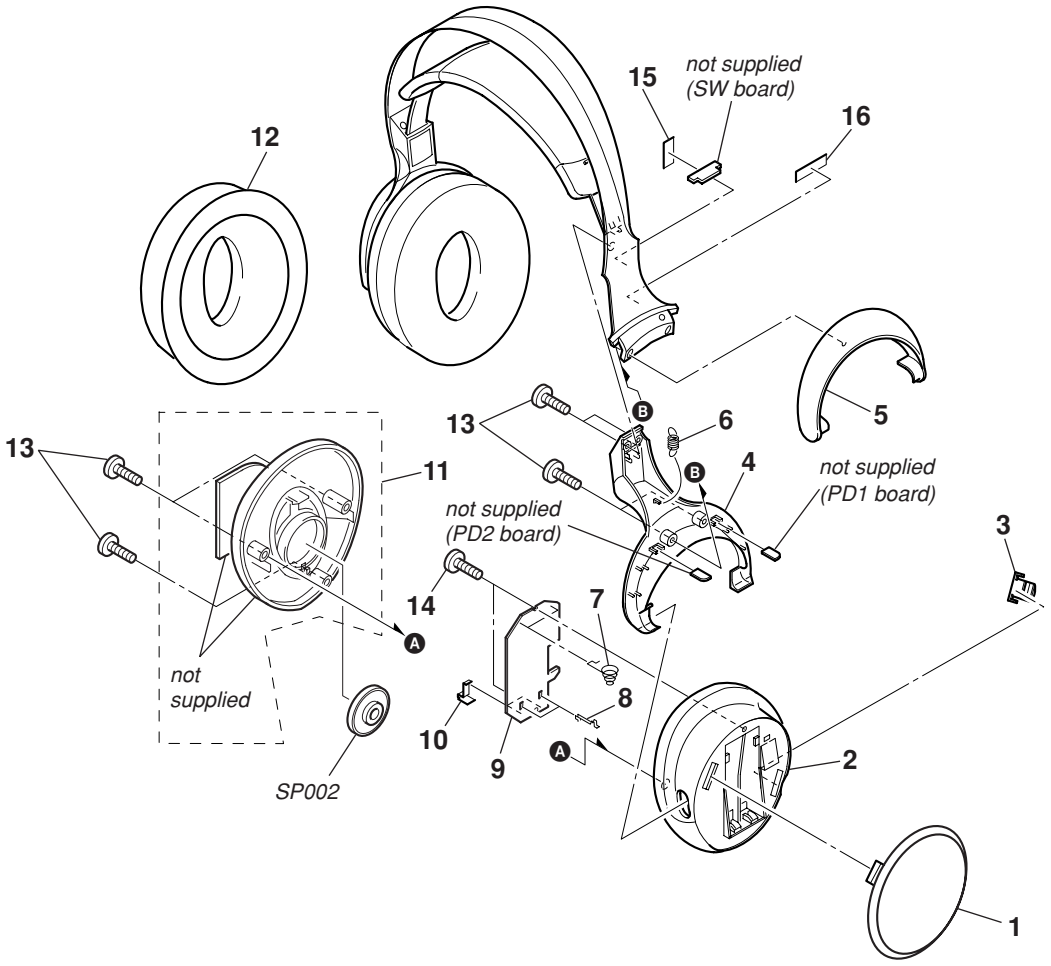


SECTION 4
EXPLODED VIEWS

NOTE:

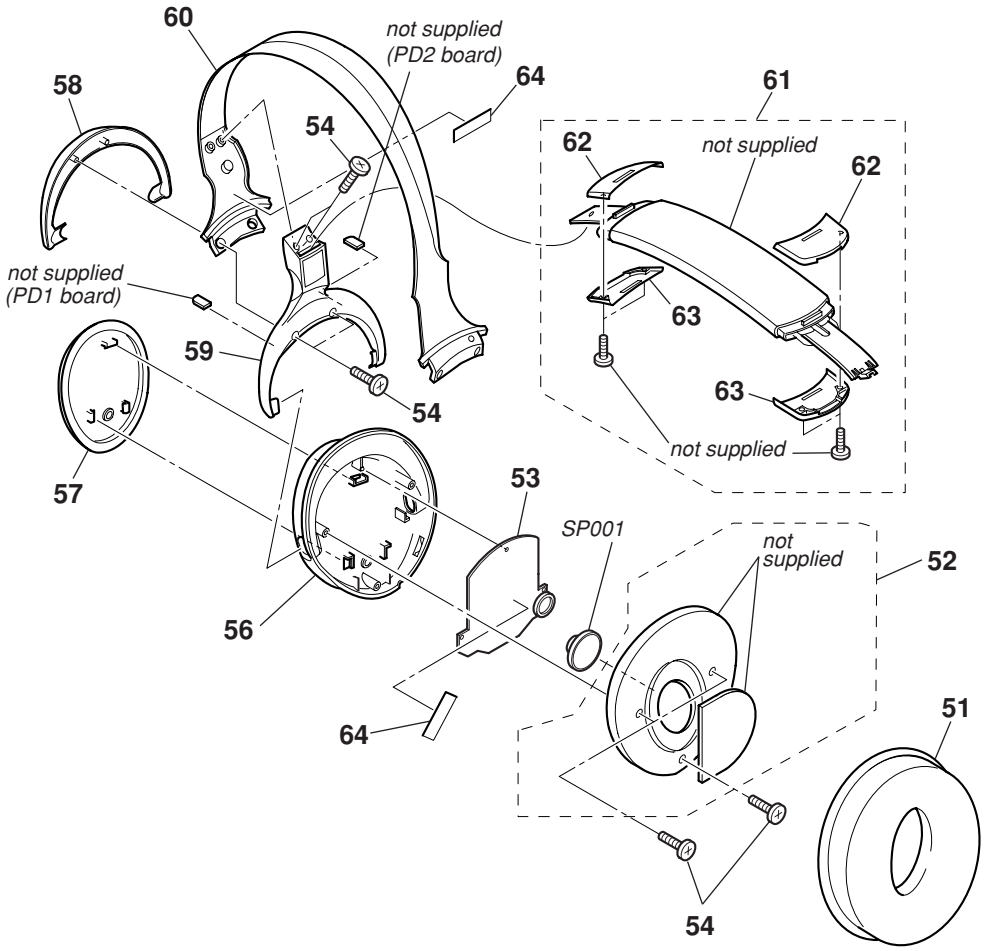
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of this parts list.

4-1. HOUSING (L) ASSY SECTION



Ref. No.	Part No.	Description	Remarks
1	X-2024-577-1	LID ASSY, BATTERY	
2	3-246-142-01	HOUSING (L)	
3	3-246-148-01	BUTTON	
4	2-547-961-01	LID (L), HANGER	
5	2-345-564-01	HANGER (L)	
6	3-257-911-01	SPRING, TENSION	
7	3-246-151-03	TERMINAL (–), BATTERY	
8	3-246-150-02	TERMINAL (+), BATTERY	
9	A-1083-889-A	BATT BOARD, COMPLETE	
10	3-246-152-02	TERMINAL, CHARGE	
11	X-2024-574-1	PLATE (L) SUB ASSY, FRONT	
12	3-246-153-13	PAD (L), EAR	
13	3-253-143-01	SCREW (B2.6), (+)P TAPPING	
14	3-254-070-11	SCREW	
15	3-257-555-02	CUSHION (S/W)	
16	3-252-068-01	CUSHION (B)	
SP002	1-542-593-11	DRIVER (040F020)	

4-2. HOUSING (R) ASSY SECTION



Ref. No.	Part No.	Description	Remarks
51	3-246-154-13	PAD (R), EAR	
52	X-2024-575-1	PLATE (R) SUB ASSY, FRONT	
53	A-1083-890-A	RX BOARD, COMPLETE	
54	3-253-143-01	SCREW (B2.6), (+)P TAPPING	
56	3-257-778-01	HOUSING (R)	
57	X-2024-573-1	CAP (R) ASSY, HOUSING	
58	2-345-565-01	HANGER (R)	
59	3-246-141-71	LID (R), HANGER	

Ref. No.	Part No.	Description	Remarks
60	3-246-137-01	BAND, HEAD	
61	X-3383-905-2	CUSHION ASSY, HEAD	
62	4-966-791-01	STOPPER (UPPER)	
63	4-966-792-01	STOPPER, (LOWER)	
64	3-252-068-01	CUSHION (B)	
SP001	1-542-593-11	DRIVER (040F020)	

BATT PD1 PD2 RX

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
 uF: µF
- RESISTORS
 All resistors are in ohms.
 METAL: metal-film resistor
 METAL OXIDE: Metal Oxide-film resistor
 F: nonflammable
- COILS
 uH: µH
- SEMICONDUCTORS
 In each case, u: µ, for example:
 uA...: µA... , uPA... , µPA... ,
 uPB... , µPB... , uPC... , µPC... ,
 uPD..., µPD...

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remarks
	A-1083-889-A	BATT BOARD, COMPLETE			

		< CAPACITOR >			
C503	1-135-856-91	TANTAL. CHIP	100uF	20%	10V
C504	1-135-856-91	TANTAL. CHIP	100uF	20%	10V
C505	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C506	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C507	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C508	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C510	1-100-507-91	CERAMIC CHIP	4.7uF	20%	6.3V
C511	1-100-507-91	CERAMIC CHIP	4.7uF	20%	6.3V
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C514	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C516	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C602	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C603	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C604	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C605	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
		< DIODE >			
D501	6-500-220-11	DIODE RB161M-20FTR			
D601	8-719-058-24	DIODE RB501V-40TE-17			
		< IC >			
IC502	6-705-692-01	IC XC6219B252MR			
IC503	6-707-196-01	IC XC6371A281PR			
IC601	6-702-083-01	IC XC61CN1902NR			
		< COIL >			
L501	1-410-645-31	INDUCTOR	100uH		
L502	1-469-524-91	INDUCTOR	4.7uH		
		< TRANSISTOR >			
Q601	6-550-363-01	TRANSISTOR 2SB1690KT146			
Q602	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R			
		< RESISTOR >			
R503	1-216-833-11	METAL CHIP	10K	5%	1/10W
R601	1-216-833-11	METAL CHIP	10K	5%	1/10W
R602	1-216-845-11	METAL CHIP	100K	5%	1/10W
R603	1-216-821-11	METAL CHIP	1K	5%	1/10W
R604	1-216-857-11	METAL CHIP	1M	5%	1/10W

Ref. No.	Part No.	Description			Remarks
		< SWITCH >			
S601	1-786-130-11	SWITCH, PUSH (1 KEY) (BATT DET)			
S602	1-762-917-11	SWITCH, DETECTION (SMALL TYPE)			
					(BATT DET)

		PD1 BOARD (L-CH REAR)			

		< DIODE >			
D401	8-719-058-49	DIODE PP508			
D402	8-719-058-49	DIODE PP508			

		PD1 BOARD (R-CH FRONT)			

		< DIODE >			
D405	8-719-058-49	DIODE PP508			
D406	8-719-058-49	DIODE PP508			

		PD2 BOARD (L-CH FRONT)			

		< DIODE >			
D403	8-719-058-49	DIODE PP508			
D404	8-719-058-49	DIODE PP508			

	1-864-939-11	PD2 BOARD (R-CH REAR)			

		< DIODE >			
D407	8-719-058-49	DIODE PP508			
D408	8-719-058-49	DIODE PP508			

	A-1083-890-A	RX BOARD, COMPLETE			

		< CAPACITOR >			
C001	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C002	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C003	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C004	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

RX

Ref. No.	Part No.	Description			Remarks
C005	1-124-779-00	ELECT CHIP	10uF	20%	16V
C006	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C007	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C008	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C009	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C010	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C011	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C012	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C013	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C014	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C015	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C016	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C017	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C101	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C103	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C104	1-124-779-00	ELECT CHIP	10uF	20%	16V
C105	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C107	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C108	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C109	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C110	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C111	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C112	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C113	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C115	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C116	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C117	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C118	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C119	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C120	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C121	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C125	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C126	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C130	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C201	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C202	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C203	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C204	1-126-208-21	ELECT CHIP	47uF	20%	4V
C205	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C206	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C207	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C208	1-124-779-00	ELECT CHIP	10uF	20%	16V
C210	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C301	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C302	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C303	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C304	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C305	1-104-912-11	TANTAL. CHIP	3.3uF	20%	16V
C306	1-137-934-91	TANTAL. CHIP	47uF	20%	10V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C309	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C310	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C311	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C312	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C313	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C314	1-104-912-11	TANTAL. CHIP	3.3uF	20%	16V
C315	1-137-934-91	TANTAL. CHIP	47uF	20%	10V
C316	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C501	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C502	1-110-569-21	TANTAL. CHIP	47uF		4V
C509	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< DIODE >			
D101	8-719-988-61	DIODE 1SS355TE-17			
D102	8-719-988-61	DIODE 1SS355TE-17			
D103	8-719-988-61	DIODE 1SS355TE-17			
D104	8-719-988-61	DIODE 1SS355TE-17			
D502	8-719-059-98	DIODE SLR-342VC3F (POWER)			
		< IC >			
IC001	8-753-208-23	IC CXA3668N-T4			
IC101	8-752-425-06	IC CXD4017R			
IC102	6-707-193-01	IC BU4223G-TR			
IC201	6-707-192-01	IC PCM1773PWR			
IC301	8-759-347-33	IC NJM2113V-TE2			
IC302	8-759-347-33	IC NJM2113V-TE2			
IC501	6-701-851-01	IC XC62HR1502MR			
		< COIL >			
L001	1-469-525-91	INDUCTOR 10uH			
L002	1-469-524-91	INDUCTOR 4.7uH			
L003	1-412-002-31	INDUCTOR 4.7uH			
L004	1-414-760-21	INDUCTOR, FERRITE BEAD			
L101	1-414-760-21	INDUCTOR, FERRITE BEAD			
L102	1-414-760-21	INDUCTOR, FERRITE BEAD			
L103	1-469-524-91	INDUCTOR 4.7uH			
L104	1-469-524-91	INDUCTOR 4.7uH			
L105	1-414-760-21	INDUCTOR, FERRITE BEAD			
L106	1-414-594-11	INDUCTOR, FERRITE BEAD			
L107	1-469-524-91	INDUCTOR 4.7uH			
L108	1-414-760-21	INDUCTOR, FERRITE BEAD			
L109	1-469-526-91	INDUCTOR 22uH			
L201	1-469-526-91	INDUCTOR 22uH			
L301	1-469-524-91	INDUCTOR 4.7uH			
L302	1-414-760-21	INDUCTOR, FERRITE BEAD			
L303	1-414-760-21	INDUCTOR, FERRITE BEAD			
L304	1-469-524-91	INDUCTOR 4.7uH			
L305	1-414-760-21	INDUCTOR, FERRITE BEAD			
L306	1-414-760-21	INDUCTOR, FERRITE BEAD			
		< TRANSISTOR >			
Q101	8-729-928-81	TRANSISTOR DTC144EE			
Q301	8-729-043-69	TRANSISTOR UN2225-(TX).S0			
Q302	8-729-043-69	TRANSISTOR UN2225-(TX).S0			
		< RESISTOR >			
R001	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R002	1-216-821-11	METAL CHIP	1K	5%	1/10W
R003	1-216-839-11	METAL CHIP	33K	5%	1/10W
R004	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R101	1-216-821-11	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R102	1-216-821-11	METAL CHIP	1K	5%	1/10W
R103	1-216-821-11	METAL CHIP	1K	5%	1/10W
R104	1-218-664-11	METAL CHIP	68	0.5%	1/10W
R106	1-216-833-11	METAL CHIP	10K	5%	1/10W
R107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R108	1-216-821-11	METAL CHIP	1K	5%	1/10W
R109	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R110	1-216-820-11	METAL CHIP	820	5%	1/10W
R111	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R112	1-216-833-11	METAL CHIP	10K	5%	1/10W
R201	1-216-821-11	METAL CHIP	1K	5%	1/10W
R202	1-216-821-11	METAL CHIP	1K	5%	1/10W
R301	1-216-843-11	METAL CHIP	68K	5%	1/10W
R302	1-216-833-11	METAL CHIP	10K	5%	1/10W
R306	1-216-843-11	METAL CHIP	68K	5%	1/10W
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R308	1-216-833-11	METAL CHIP	10K	5%	1/10W
R501	1-216-833-11	METAL CHIP	10K	5%	1/10W
R502	1-216-817-11	METAL CHIP	470	5%	1/10W
		< VARIABLE RESISTOR >			
RV201	1-223-517-11	RES, VAR, CARBON 50K/50K (VOL◣)			
		< VIBRATOR >			
X101	1-795-485-21	VIBRATOR, CRYSTAL (SMD) (12.288MHz)			

		RX-SW BOARD			

		< SWITCH >			
S701	1-762-003-11	SWITCH, PUSH (AUTO ON/OFF)			

		MISCELLANEOUS			

SP001	1-542-593-11	DRIVER (040F020)			
SP002	1-542-593-11	DRIVER (040F020)			

		ACCESSORIES			

	1-756-316-32	BATTERY, NICKEL.HYDROGEN (BP-HP550)			
	2-345-751-11	MANUAL, INSTRUCTION (ENGLISH, KOREAN)			

MEMO

MDR-IF4000

SONY

SERVICE MANUAL

Ver. 1.1

US Model
Canadian Model
AEP Model
E Model

SUPPLEMENT - 1

File this Supplement with the Service Manual.

Subject : SUFFIX CHANGE OF RX BOARD

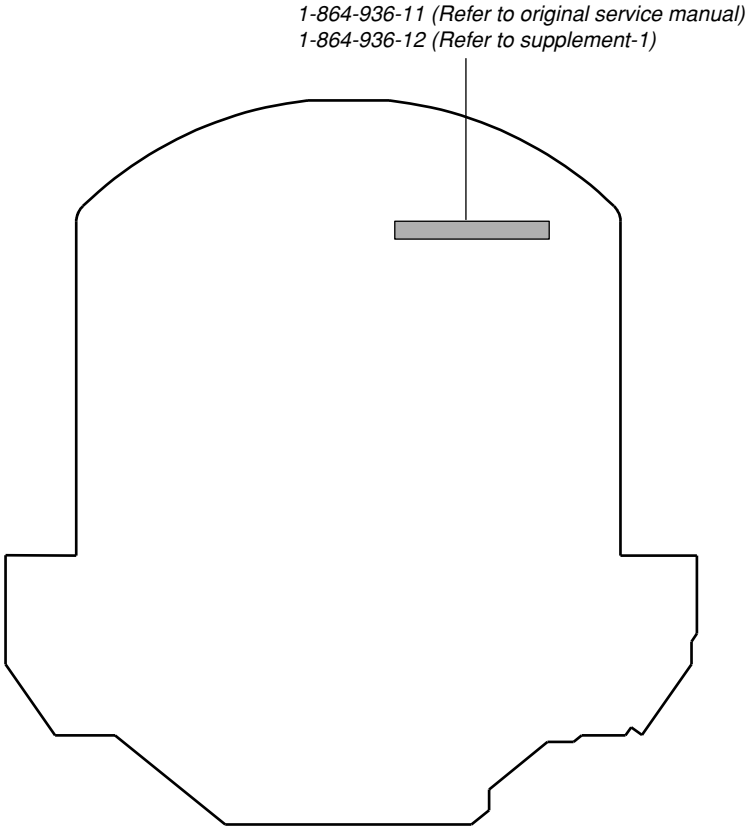
9-879-301-81

• CHANGE OF RX BOARD

The RX board was changed into suffix-12.
Printed wiring board and schematic diagram of new type, and changed parts list are described in this Supplement-1.
Refer to original service manual (9-879-301-02) previously issued for the other information.

NEW TYPE IDENTIFICATION

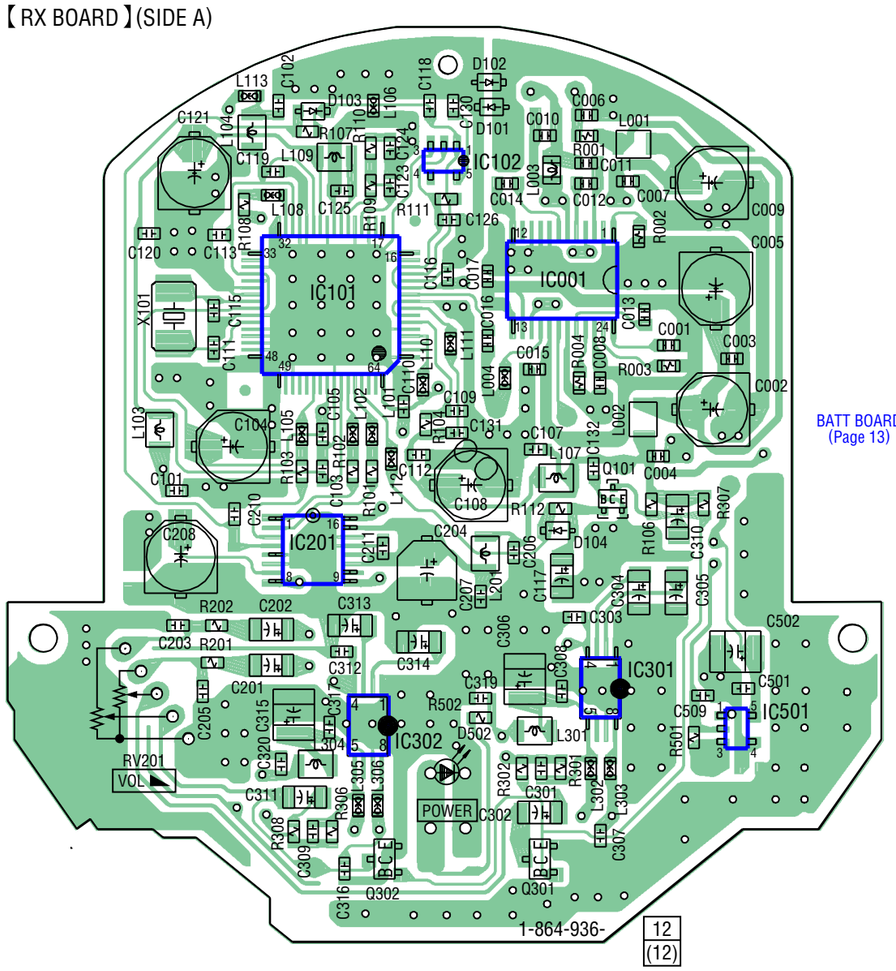
[RX BOARD] (SIDE B)



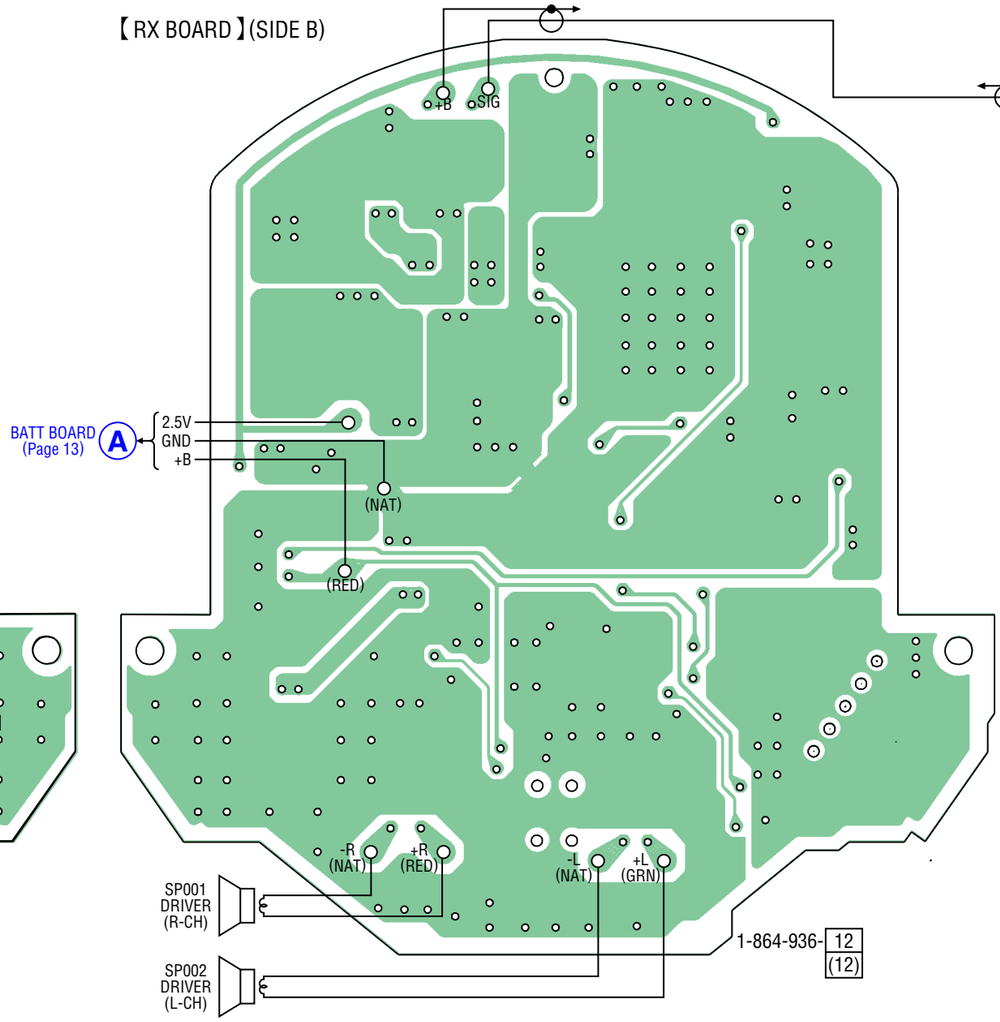
PRINTED WIRING BOARD – RECEIVER SECTION – Suffix-12

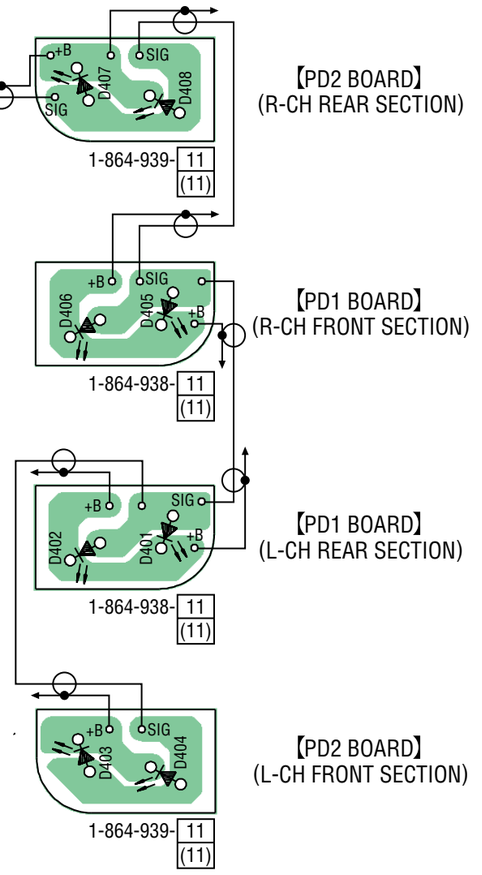
: Uses unleaded solder.

【RX BOARD】(SIDE A)



【RX BOARD】(SIDE B)

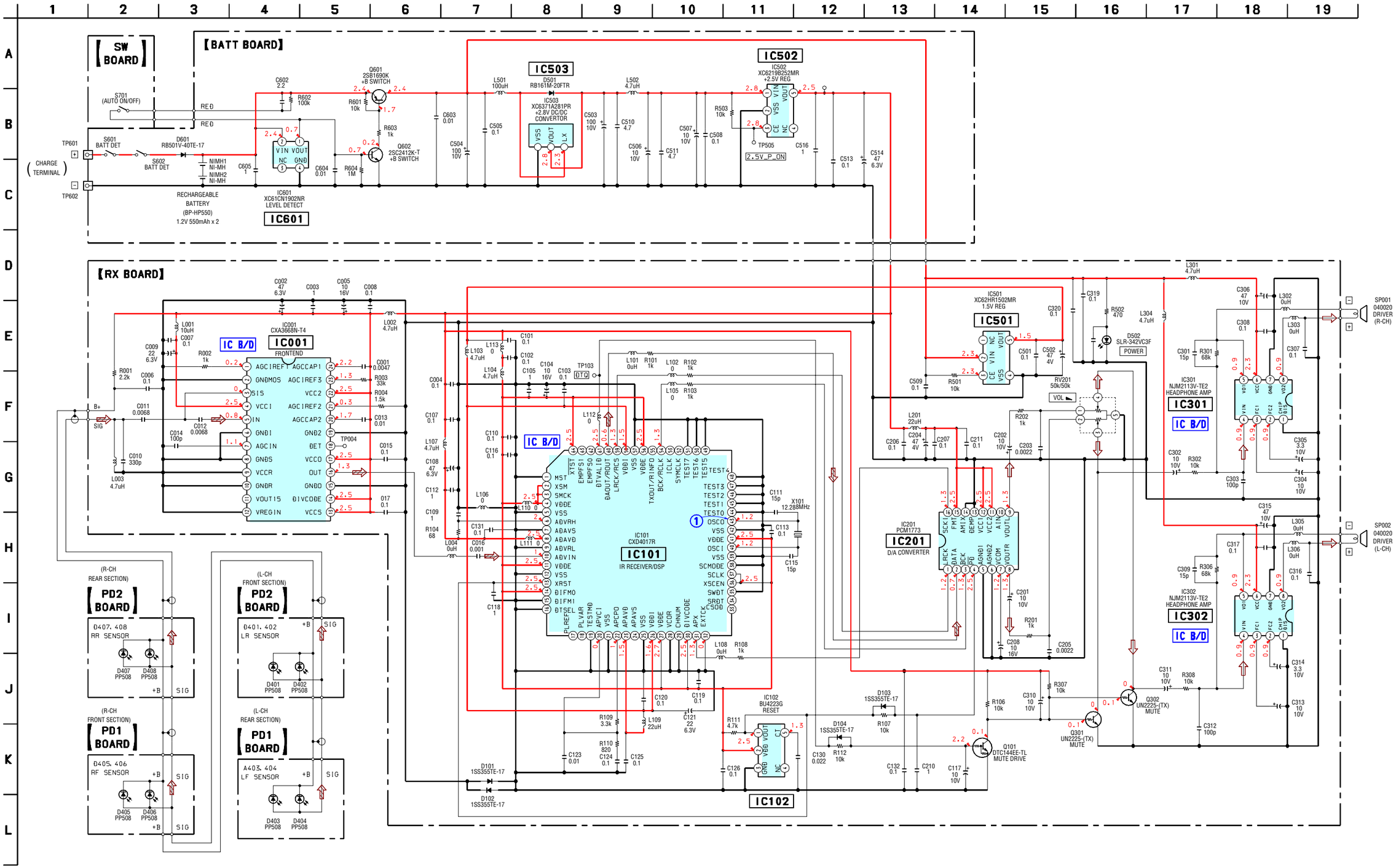




- **Semiconductor Location**

Ref. No.	Location
D101	A-3
D102	A-3
D103	A-2
D104	C-3
D401	C-9
D402	C-9
D403	D-9
D404	D-9
D405	B-9
D406	B-9
D407	A-9
D408	A-9
D502	D-3
IC001	B-3
IC101	B-2
IC102	A-3
IC201	C-2
IC301	D-3
IC302	D-2
IC501	D-4
Q101	C-3
Q301	D-3
Q302	D-2

SCHEMATIC DIAGRAM – RECEIVER SECTION – Suffix-12



ELECTRICAL PARTS LIST

RX: Suffix-12

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
 uF: µF
- RESISTORS
 All resistors are in ohms.
 METAL: metal-film resistor
 METAL OXIDE: Metal Oxide-film resistor
 F: nonflammable
- COILS
 uH: µH
- SEMICONDUCTORS
 In each case, u: µ, for example:
 uA...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...
- Abbrivation
 KR : Korean model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remarks
	A-1083-890-A	RX BOARD, COMPLETE			

		< CAPACITOR >			
C001	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C002	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C003	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C004	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C005	1-124-779-00	ELECT CHIP	10uF	20%	16V
C006	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C007	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C008	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C009	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C010	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C011	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C012	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C013	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C014	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C015	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C016	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C017	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C101	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C103	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C104	1-124-779-00	ELECT CHIP	10uF	20%	16V
C105	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C107	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C108	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C109	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C110	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C111	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C112	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C113	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C115	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C116	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C117	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C118	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C119	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C120	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C121	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C125	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C126	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description			Remarks
C130	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C131	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C132	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C201	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C202	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C203	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C204	1-126-208-21	ELECT CHIP	47uF	20%	4V
C205	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C206	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C207	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C208	1-124-779-00	ELECT CHIP	10uF	20%	16V
C210	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C211	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C301	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C302	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C303	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C304	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C305	1-104-912-11	TANTAL. CHIP	3.3uF	20%	16V
C306	1-137-934-91	TANTAL. CHIP	47uF	20%	10V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C309	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C310	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C311	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C312	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C313	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C314	1-104-912-11	TANTAL. CHIP	3.3uF	20%	16V
C315	1-137-934-91	TANTAL. CHIP	47uF	20%	10V
C316	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C319	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C320	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C501	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C502	1-110-569-21	TANTAL. CHIP	0PF		0V
C509	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< DIODE >			
D101	8-719-988-61	DIODE 1SS355TE-17			
D102	8-719-988-61	DIODE 1SS355TE-17			
D103	8-719-988-61	DIODE 1SS355TE-17			
D104	8-719-988-61	DIODE 1SS355TE-17			
D502	8-719-059-98	DIODE SLR-342VC3F (POWER)			

RX: Suffix-12

Ref. No.	Part No.	Description			Remarks
		< IC >			
IC001	8-753-208-23	IC CXA3668N-T4			
IC101	8-752-425-06	IC CXD4017R			
IC102	6-707-193-01	IC BU4223G-TR			
IC201	6-707-192-01	IC PCM1773PWR			
IC301	8-759-347-33	IC NJM2113V-TE2			
IC302	8-759-347-33	IC NJM2113V-TE2			
IC501	6-701-851-01	IC XC62HR1502MR			
		< COIL >			
L001	1-469-525-91	INDUCTOR	10uH		
L002	1-469-524-91	INDUCTOR	4.7uH		
L003	1-412-002-31	INDUCTOR	4.7uH		
L004	1-414-760-21	INDUCTOR, FERRITE BEAD			
L101	1-414-760-21	INDUCTOR, FERRITE BEAD			
L102	1-414-760-21	INDUCTOR, FERRITE BEAD			
L103	1-469-524-91	INDUCTOR	4.7uH		
L104	1-469-524-91	INDUCTOR	4.7uH		
L105	1-414-760-21	INDUCTOR, FERRITE BEAD			
L106	1-414-594-11	INDUCTOR, FERRITE BEAD			
L107	1-469-524-91	INDUCTOR	4.7uH		
L108	1-414-760-21	INDUCTOR, FERRITE BEAD			
L109	1-469-526-91	INDUCTOR	22uH		
L110	1-414-760-21	INDUCTOR, FERRITE BEAD			
L111	1-414-760-21	INDUCTOR, FERRITE BEAD			
L112	1-414-760-21	INDUCTOR, FERRITE BEAD			
L113	1-414-760-21	INDUCTOR, FERRITE BEAD			
L201	1-469-526-91	INDUCTOR	22uH		
L301	1-469-524-91	INDUCTOR	4.7uH		
L302	1-414-760-21	INDUCTOR, FERRITE BEAD			
L303	1-414-760-21	INDUCTOR, FERRITE BEAD			
L304	1-469-524-91	INDUCTOR	4.7uH		
L305	1-414-760-21	INDUCTOR, FERRITE BEAD			
L306	1-414-760-21	INDUCTOR, FERRITE BEAD			
		< TRANSISTOR >			
Q101	8-729-928-81	TRANSISTOR	DTC144EE		
Q301	8-729-043-69	TRANSISTOR	UN2225-(TX).S0		
Q302	8-729-043-69	TRANSISTOR	UN2225-(TX).S0		
		< RESISTOR >			
R001	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R002	1-216-821-11	METAL CHIP	1K	5%	1/10W
R003	1-216-839-11	METAL CHIP	33K	5%	1/10W
R004	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R101	1-216-821-11	METAL CHIP	1K	5%	1/10W
R102	1-216-821-11	METAL CHIP	1K	5%	1/10W
R103	1-216-821-11	METAL CHIP	1K	5%	1/10W
R104	1-218-664-11	METAL CHIP	68	0.5%	1/10W
R106	1-216-833-11	METAL CHIP	10K	5%	1/10W
R107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R108	1-216-821-11	METAL CHIP	1K	5%	1/10W
R109	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R110	1-216-820-11	METAL CHIP	820	5%	1/10W
R111	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R112	1-216-833-11	METAL CHIP	10K	5%	1/10W
R201	1-216-821-11	METAL CHIP	1K	5%	1/10W
R202	1-216-821-11	METAL CHIP	1K	5%	1/10W
R301	1-216-843-11	METAL CHIP	68K	5%	1/10W
R302	1-216-833-11	METAL CHIP	10K	5%	1/10W
R306	1-216-843-11	METAL CHIP	68K	5%	1/10W
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R308	1-216-833-11	METAL CHIP	10K	5%	1/10W
R501	1-216-833-11	METAL CHIP	10K	5%	1/10W
R502	1-216-817-11	METAL CHIP	470	5%	1/10W
		< VARIABLE RESISTOR >			
RV201	1-223-517-11	RES, VAR, CARBON	50K/50K (VOL◣)		
		< VIBRATOR >			
X101	1-795-485-21	VIBRATOR, CRYSTAL (SMD) (12.288MHz)			

		ACCESSORIES			

	1-756-316-22	BATTERY, NICKEL.HYDROGEN (US, Canadian)			
	1-756-316-32	BATTERY, NICKEL.HYDROGEN (AEP, KR)			
	2-345-751-12	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, KOREAN)			
	2-345-751-21	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN, PORTUGUESE) (AEP)			

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004.11	New
1.1	2005.02	Addition of US, Canadian and AEP models. Supplement-1 : Suffix change of RX board. (ECA76661)